zatti and Smith published a similar work in 1895 covering a large part of the Sympetalae.

In this volume, *Polypodium oaxacanum* Conzatti (p. 94) is described, in Spanish, as a new species. So also are *Goniophlebium stramineum* Und. (p. 105), *Ophioglossum Pringlei* Und. (p. 141), and *Dryopteris Maxoni* Und. (p. 19), described from specimens bearing these names in the author's herbarium; the last is really *D. Maxoni* Und. and C. Chr., with a different type. *Notholaena brachypoda* Maxon (p. 72) also appears for the first time with a description.

New combinations are: *Phlebodium astrolepis* (Liebmann), p. 100; *P. polylepis* (Roem.), p. 101; *P. erythrolepis* (Weatherby), p. 101; *P. Conzatti* (Weatherby), p. 101; *Goniophlebium laevigatum* (Cav.), p. 103; *G. fraternum* (Cham. y. Schl.), p. 104; *G. Collinsii* (Maxon), p. 106; *G. Rosei* (Maxon), p. 107; *Phymatodes angusta* (Mett.), p. 109 (this error traces back through Rovirosa to Hooker; this is the type species of *Pleopeltis*); *P. Palmeri* (Maxon), p. 109; *Dicranopteris pubescens* (H. B. K.), p. 129. *Poecilopteris repanda* (Bl.) Presl is reported from Oaxaca on the author's identification.

The author has, and has used diligently, the publications of Maxon and Weatherby. For older records, he seems to have been dependent upon Rovirosa (based in turn on Synopsis Filicum); directly upon the Synopsis Filicum of 1873; and upon Moore's Index of 1857–'60. Except where Maxon's work has guided him in modern practice, his genera are Moore's. As just one result of the use of these most divergent guides, *Pteridium caudatum* (L.) Maxon appears under *Pteridium,* but *Pteris aquilina* and *P. laciniata,*—type species respectively of *Pteridium* and *Lonchitis* (and *Anisosorus*),—are included in *Pteris.*

Professor Conzatti's ambition to assemble and arrange in one work the widely scattered publications on the rich flora of Mexico, and to present this in the language of Mexico for Mexican use is merely appreciative of an urgent need. He brings to it a long half-century of devotion. His style is a happy combination of scientific brevity and literary ease. It is no less than a tragedy that his resources and facilities are incommensurate with his industry and zeal.—E. B. Copeland.

Plants of Crater Lake National Park. By Elmer I. Applegate. The American Midland Naturalist. Vol. 22, No. 2, pp. 225–314, 3 plates. 1939. Price fifty cents, prepaid; a few copies obtainable from Dr. Theodor Just, Editor, The American Midland Naturalist, University of Notre Dame, Notre Dame, Indiana.

Mr. Applegate has successfully brought to publication a comprehensive account of a flora with which he has been closely concerned for more than four decades. Crater Lake National Park, once an area of intensive volcanic activity, lies athwart the main

axis of the Cascade Range in southern Oregon. Its one hundred square miles embrace coniferous forests, moist meadows, timberline conditions, pumice "deserts," sheltered canyon bottoms and the precipitous rocky cliffs of the Rim. Species characteristic of the Transition, Canadian and Hudsonian life zones all occur within its limits, and the thousand-foot walls of the caldera in which Crater Lake lies, present remarkable instances of zonal nonconformity.

Because of the position of the area and its diverse habitats, migration lanes have been open from the Columbia plateau, the humid region to the west of the Cascades, and the ancient Klamath-Siskiyou mountain mass lying to the south. The catalogue includes a total of some 570 species and subspecific entities from within the boundaries of the park, of which about a dozen are thought to be endemic. The list is based primarily upon the author's own collections. Of these, one set is preserved in the Dudley Herbarium of Stanford University, where it will be permanently available for consultation; a second set is to be housed at Crater Lake.

The introductory portion of the paper includes a brief ecological description of the park, some interesting notes on the author's explorations of its flora and a partial bibliography of pertinent writings. The taxonomic account is equipped with complete but non-technical keys throughout. Each entity (with the exception of the species of *Carex*) is provided with a few descriptive phrases, to facilitate identification, and full details regarding its known localities of occurrence and characteristic habitats.

The author's taxonomic treatment is predominantly conservative, and simple trinomials have been employed to avoid the necessity of either admitting subspecies in some genera and varieties in others, or else of making extensive changes in status to achieve uniformity. The determinations of specialists have afforded some guide posts for the recognition of species in difficult groups, but the paper is entirely Mr. Applegate's own work. He suggests that some name-alterations may be necessary, a prophecy the future will probably confirm, since even one tautonym has slipped into the catalogue.

The writer has not only given an excellent account of the interesting flora of the southern Cascade Range, but has simultaneously provided his native state with its most complete local flora.—L. Constance.

Keys to the Phyla of Organisms, including Keys to the Orders of the Plant Kingdom. By Fred A. Barkley. Privately published by the author, and for sale by the Associated Students' Store, Montana State University, Missoula, Montana. Pp. 1–39. November, 1939. $.75.

The keys in this publication are especially designed to aid